

Appl. No. 09/997,084
Amendment dated October 18, 2004
Reply to Office Action mailed June 17, 2004

REMARKS/ARGUMENTS

Claims 1- 4, 7-19 and 23-30 are pending. Claims 5 and 6 have been cancelled without intending to abandon or to dedicate to the public any patentable subject matter. As set forth more fully below, reconsideration and withdrawal of the Examiner's rejections of the claims are respectfully requested.

Claim Rejections Under 35 U.S.C. § 102

The Examiner has rejected Claims 1-4 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,627,144 (hereinafter "Suda"). Applicants have amended Claim 1 to include the limitations of Claims 5 and 6, noted to be allowable by the Examiner. Claims 5 and 6 have been cancelled.

The Examiner has rejected Claims 23 and 24 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,515,264 (hereinafter "Toya"). Claim 23 has been amended to recite a carbon-based heating element having an electric-specific resistance in a lit state of between -20% and +20% with respect to the electric specific resistance in the unlit state. Support for this amendment can be found in the specification at least at page 9, lines 5-14. Toya does not teach or suggest the use of a carbon-based heating element having this characteristic. Therefore, Toya does not anticipate Claims 23 and 24, as amended.

Applicants therefore respectfully request the Examiner's rejections under 35 U.S.C. § 102(e) be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

The Examiner has rejected Claims 5, 7, and 9 under 35 U.S.C. § 103(a) as being obvious over Suda in view of Toya. Applicants have cancelled Claim 5. Claims 7 and 9 have been amended to depend from Claim 1 and thereby incorporate the limitations of Claim 6 noted to be

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allowable by the Examiner.

The Examiner has rejected Claim 8 under 35 U.S.C. § 103(a) as being obvious over Suda in view of Toya and JP 2000-306657 (hereinafter "Higashiyama"). Similar to Claims 7 and 9, Applicants have amended Claim 8 to depend from Claim 1 and thereby incorporate the limitations of Claim 6 noted to be allowable by the Examiner.

The Examiner has rejected Claim 25 under 35 U.S.C. § 103(a) as being obvious over Suda. Applicants have amended Claim 25 to depend from Claim 23. As noted above with respect to the Examiner's rejections under 35 U.S.C. § 102(e), Claim 23 has been amended to recite a carbon-based heating element having an electric-specific resistance in a lit state of between -20% and +20% with respect to the electric specific resistance in the unlit state. Suda does not teach or suggest the use of a carbon-based heating element having this characteristic. Therefore, Suda does not teach or suggest every limitation of Claim 25, as amended.

The Examiner has rejected Claim 26-30 under 35 U.S.C. § 103(a) as being obvious over Suda in view of "Kunikazu (JP 2001-150115)." JP2001-150115 is entitled "connection structure of a melted metal supply tube" and appears to be entirely unrelated to the instant patent application. Applicants believe that the Examiner meant to cite JP2001-155692, a copy of which was supplied with the Office Action mailed 17 June 2004. Claims 26-30 incorporate the infrared lamp described in Claim 25 including a carbon-based heating element having an electric-specific resistance in a lit state of between -20% and +20% with respect to the electric specific resistance in the unlit state. As noted above, with respect to the Examiner's rejection of Claim 25, Suda does not teach or suggest the use of a carbon-based heating element having this characteristic. JP2001-155692 does not overcome this insufficiency of Suda. Thus, the combination of Suda and JP2001-155692 does not teach or suggest every limitation of Claims 26-30, as amended.

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In light of the fact that the Suda, Toya, Higashiyama, and JP2001-155692 references do not teach all of the limitations of the pending claims, as amended, Applicants request the Examiner's rejections under 35 U.S.C. § 103(a) be withdrawn.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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